REMARKS

This responds to the Final Office Action mailed on September 8, 2009.

Claim 4 is amended. Claims 1-9 are pending.

The § 102(b) Rejection and § 103(a) Rejection

Claims 1-3, 5 and 6 were rejected under 35 U.S.C. 102(b) as being anticipated by MOSBACH (US Patent 6,489,418 B1). Claims 1-6 were rejected under 35 U.S.C. 103(a) as being unpatentable over MOSBACH, as applied to claims 1-3, 5 and 6. These rejections are respectfully traversed.

As amended, claim 1 recites "[a] method of producing a molecularly-imprinted material, comprising: (a) synthesizing a peptide corresponding to an epitope of a target peptide or target protein by attaching a first amino acid, followed by attaching one or more amino acid(s) to said first amino acid on a disposable surface modified support to produce a support surface-attached peptide; (b) providing a selected monomer mixture; (c) contacting said monomer mixture with said support surface-attached peptide; (d) initiating polymerisation of at least one crosslinking reaction; (e) dissolving or degrading said support surface-attached peptide and said support; and (f) obtaining said molecularly imprinted material, wherein said epitope is a peptide that corresponds to only part of the target peptide or protein.

First Applicant respectfully submits that one of skill in the art would recognize that an epitope in the context of the instant claims is a short peptide that represents only part of a larger peptide or protein (as an epitope represents an antigen; in recognizing an antigen, an antibody interacts with only a small part of it, the epitope (the antigenic site of a macromolecule). Thus, definition of epitope provided by the Examiner, namely referring to "insulin" or "trypsin" as an eptiope, is not how one of skill in the art would define an epitope. To further this point, Applicant provides a copy of Rachkov et al., Towards molecularly imprinted polymers selective to peptides and proteins. The epitope approach. *Biochimica et Biophysica Acta* 1544 (2001) 255-266 (Rachkov et al. was cited in Applicants specification and is provided herewith). With regards to the meaning of epitope, see, for example, abstract and page 256, bottom of first column of Rachkov et al.

However, Mosbach only discloses the use of large target protein/macromolecule, namely insulin or trypsin, as the template. Mosbach does not disclose a short peptide that represents only part of a larger peptide or protein.

Additionally, the claims recite the synthesis of a peptide corresponding to an epitope on a disposable surface.... In order to further clarify the claimed subject matter, Applicant has amended claim 1 to further recite that synthesizing is "by attaching a first amino acid, followed by attaching one or more amino acid(s) to said first amino acid on a disposable surface...."

This amendment is supported throughout the specification, in particular, 1) the claims, abstract, and paragraphs [0010], [0011], and [0024] of Pub No. 2005.0171334 state by "synthesizing...on a disposable surface...;" 2) Figure 2 illustrates the synthesis of a peptide on the surface of a disposable support; 3) paragraph [0020] refers to "solid phase synthesis of a peptide corresponding to a particular epitope of a given target peptide or protein" and that this support-bound peptide, after synthesis on the support, can serve as an eptiope template provided that the peptide is synthesized on a disposable support; paragraph [0023] refers to the ability to synthesize a polypeptide template that can be further built up, step-by-step, *in situ* at the surface of the support and that this ability for *in situ* synthesis of the template molecule allows for the possibility to control orientation and 3-D stereochemistry of the final template molecule; and Example 1 describes the synthesis of the peptide or peptide epitope on the support material using standard Merrifield chemistry, a method for synthesizing chains of amino acids.

Furthermore, the specification demonstrates that, *contrary* to the Examiner's assertion at page 4 of the Office Action, attachment of a preformed peptide (e.g., synthesis) to the support is not equivalent to synthesis. As demonstrated above and in the specification, synthesis refers to a method in which the epitope peptide is synthesized directly on the surface of a disposable support material using solid-phase peptide synthesis (SPPS), not merely attaching a molecule after being synthesized or produced elsewhere.

Traditionally, a template is synthesized separately, purified and then attached to the surface of the support material. For example, in the instance where the template is a peptide, the peptide would be synthesized on a different support material. The support material is thus different from the disposable surface modified support disclosed in claim 1 and the peptide must

then first be removed from the support material and then attached to the disposable surface modified support.

According to the instant claims, the peptide is synthesized directly on the support material where it is to be used, followed by the formation of the polymer and removal of the support and template. Consequently the crude peptide is used directly. This means that the steps involved in conventional peptide synthesis, including cleavage of the peptide from the support material where it was synthesized, purification of the peptide and the attachment of the peptide to a second support are no longer necessary.

As Mosbach only discloses the use of large macromolecules, not an epitope, and the attachment of the macromolecule as a whole to the surface of the support, rather than synthesis of a molecule directly on the surface of the support, the claims are not anticipated or obvious in view of Mosbach.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative at (612) 373-6905 to facilitate prosecution of this application.

If necessary, please charge any additional fees or deficiencies, or credit any overpayments to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 9th day of November, 2009.

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